

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

DEK DRAIN

Maryland Technology Extension Service

Dek Drain Improves Manufacturing And Installation Processes

Client Profile:

DEK DRAIN is a start-up company that custom fabricates panels of various lengths and widths from large rolls of EPDM rubber roofing membrane material for use in capturing and diverting the drip-through rain water from deck surfaces. The panels are installed on the underside of the deck, between the joists, either before or after the deck floor boards have been installed. The panels collect the run-off and direct the flow to an existing gutter system for disposal. DEK DRAIN'S product provides dry storage space under the deck for tools, lawn mowers, and firewood. The company, located in Columbia, Maryland, employs less than 20 people.

Situation:

DEK DRAIN was using a manual process to cut the 10 foot-wide rolls of EPDM material into panels with patterns that form the valley and pitch of a trough. This design moves the collected water to the downside end of the deck. The process required approximately four hours to cut the material for one job. The company wanted to reduce the labor per job, improve the accuracy of the cut panels, and improve the installation process. DEK DRAIN contacted the Maryland Technology Extension Service (MTES), a NIST MEP network affiliate, for assistance.

Solution:

MTES reviewed DEK DRAIN's cutting scheme for the tapered panels and recommended a simplified cutting approach that reduced the labor per job and also eliminated material waste. MTES also researched automated equipment that could perform the straight cutting operations and determined that a roll slitter would best meet the company requirements. MTES evaluated a number of vendors and discovered that Collins Craft had the most cost effective roll slitting equipment. DEK DRAIN visited Collins Craft to evaluate the equipment and decided to purchase the equipment in the near term.

Next, MTES visited an active installation site to evaluate the installation process. The organization recommended several new installation techniques to eliminate problems, and suggested modifications to the panel pattern that increased the trough taper and depth over the full length of the deck. By making these changes, DEK DRAIN estimates a cost savings of \$40,000.

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Results:

Changed pattern cutting and installation techniques.

Selected automation equipment and plan to procure an automated roll slitter in 2003.

Estimating increased sales of \$100,000.

Estimating labor and material cost savings of \$40,000.

Testimonial:

"The Maryland Technology Extension Service has been a great help to me during the refinement stage of our DEK DRAIN water diversion system. I was most pleased with the prompt, professional reception I received...The assistance, guidance and suggestions...provided to me translated into improved methods of fabrication and installation."

Keith Risser, Vice President